I am a computer programmer at the University of Michigan. I have over twelve years of experience with the Internet, both in using it and writing software for use with it. I am not an electrical engineer or a networking expert. But I know enough about networking to set up a secure, firewalled network in my home, complete with several nodes, including wireless, with Internet service through my local cable television company. It's not surprising that I would be in favor of cheap, ubiquitous Internet service for America. However, I believe that the plan for Broadband over Power Line (BPL) that the FCC and others have proposed is fundamentally flawed for several reasons.

The reason foremost in my mind, and probably in those of many Americans, at this time is the instability of the country's power grid. If the power companies have been unable to remove the interdependencies that allowed a localized problem to cause the enormous blackout affecting the northeastern United States since about 4:00 PM yesterday, 14 August 2003, how can the public have any confidence that they will provide reliable Internet service? It is my understanding that power companies were to be working on removing or limiting the power grid interconnectedness for the past several years. In fact, weren't the large blackouts of the 1970s a primary reason for wanting to remove those interconnections?

Another reason BPL is a bad idea is that power lines are unshielded. This is bad for people who will use BPL and for people using wireless services in the vicinity of BPL service. Unshielded power lines act as antennas that can transmit and receive signals. Depending on the frequency used to carry BPL communications over the wires, they could send signals out that will interfere with various radio bands. Bands that could be affected include, but are not limited to, wireless networking (AKA Wi-Fi or 802.11a, b, g, etc.), cellular telephones, cordless telephones, amateur radio, and citizen's band radio. But more likely, BPL service will end up being interfered with by those very same uses of radio frequency, which will turn users of those services into troublesome pariahs in the eyes of BPL users.

Furthermore, there are plenty of other sources of radio frequency interference on power lines besides those I've already mentioned. Ordinary household appliances can inject RFI onto power lines. So can engines of lawn mowers, motorcycles, and the like, if their engines are not properly maintained.

Unless unshielded power lines are going to be replaced with new, shielded ones, BPL's generation or reception of interference cannot be avoided. That replacement would be an enormous task. I doubt that power utilities will replace power lines without passing the cost of it onto consumers, which consumers will not appreciate. Consumers also won't like needing to replace wiring in their homes in order to get interference-free BPL service.

My recommendation would be to improve and broaden existing Internet services. Broadband via cable television lines and digital subscriber line (DSL) telephone needs to be offered in more areas and prices need to be reduced in areas where they're already available. As well, cellular telephone has proven itself widely popular. I think wireless networking based on standards like IEEE 802.11g would also be very popular and cause less trouble than BPL would. Currently this wireless
service is only used in households, and individual businesses. If a national wireless
"grid" were provided, fewer networks may be set up by individuals and organizations, and that grid would be used instead.

Almost any of the alternatives I've mentioned would be better than BPL. If the FCC
were to approve of BPL, it would be a serious mistake. I urge the chairman and the
board at the FCC to really think about this logically rather than with their bankbooks.